IN THE CLAIMS

1. (currently amended) A system for imaging radiation emitted by assay samples onto a ~~photoeletronic~~ photoelectronic detector, wherein an additional optical imaging device is located at the input end of a fibre optic bundle of an imaging system said bundle being adapted to convey light from the input end thereof to a photosensitive detector, ~~such as a CCD array,~~ the properties of the additional device being such as substantially to match the size of the input end of the bundle to the size and NA of a micro-sample by appropriate choices of numerical aperture for the additional device, so as to reduce the field of view of the bundle to substantially the area of the region of interest of a micro-sample to allow the bundle to view just one micro-sample, and secondly to increase the light collecting properties of the bundle in relation to small light emitting areas.

2. (original) A system according to claim 1, wherein, where the bundle has a diameter of typically 14nm and an NA typically of 0.22, the optical device requires to have a NA of approximately 0.7 if the sample has a diameter of the order of 130 microns.

3. (previously presented) A system according to claim 1, wherein the additional optical device comprises a micro lens.

4. (original) A system according to claim 3, wherein the optical device is a ball lens.

5. (previously presented) A system according to claim 3, wherein the additional device is a drum lens.

6. (previously presented) A system according to claim 1 wherein, preferably an apertured plate is located between the samples and the input end of the bundle, each aperture being aligned with one of the micro-samples, and the additional device is located between the aperture and the bundle which is to receive light from that aperture.

7. (original) A system according to claim 6, wherein, when the samples are generally circular, the apertures are also general circular.

8. (original) A system according to claim 6, wherein, when the samples are elongate, the aperture may be square or rectangular and dimensioned to allow for tolerance in the size and lateral position of the micro-samples as determined by the lateral position of a sample in a sample array.

9. (original) A system according to claim 8, wherein the samples are microcapilliaries.

10. (previously presented) A system according to claim 2, wherein the combination of the additional optical device with a background reducing aperture, is effective to increase the light collecting properties of the bundle per unit volume of the sample, by a factor in the range 10 to 20.

11. (previously presented) A system according to claim 1, wherein the sample is systematically scanned.

12. (original) A system according to claim 11, wherein the couple is scanned by moving the plate containing the micro capilliaries or microwells relative to the array of fibre optic bundles and associated microlenses.

13. (previously presented) A system according to claim 3, wherein each microlens has an anti-reflective coating selected to take account of the range of excitation and emission wavelengths associated with the assay.

14. (previously presented) A system according to claim 3, wherein each microlens is constructed from low fluorescence material having a selected refractive index.

15. (previously presented) A system according to claim 3 wherein the microlens

material comprises high quality sapphire.

16. (new) A system according to claim 1, in which said photosensitive detector comprises a CCD array.